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DESCRIPTION

OF THE

ABATTOIRS OF PARIS.

BY

RICHARD BOXALL GRANTHAM, M. INST. C.E.

WITH AN ABSTRACT OF THE DISCUSSION UPON THE PAPER.

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EXCERPT MINUTES OF PROCEEDINGS

OF THE

INSTITUTION OF CIVIL ENGINEERS.

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*BY PERMISSION OF THE COUNCIL.*

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## INSTITUTION OF CIVIL ENGINEERS.

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February 6, 1849.

JOSHUA FIELD, President, in the Chair.

No. 795.—“ Description of the Abattoirs of Paris.” By Richard Boxall Grantham, M. Inst. C. E.\*

Amongst the various measures which must be speedily adopted for the sanitary improvement of large towns, one of the most important is that of public slaughter-houses; it therefore becomes necessary, that their construction and management should be carefully studied, but as so few attempts have hitherto been made to introduce them into this country, at least with any degree of arrangement, examples must be sought for on the Continent, where they are almost universally adopted.

The abattoirs of Paris are perhaps, on the whole, the best specimens of establishments of this class, and their administration and statistics present some very remarkable features which deserve examination, previous to commencing similar constructions in Great Britain.

The butcher's trade in Paris is conducted on a peculiar system, and, like almost every other business, is under the control, or surveillance of the police, or municipal authorities; indeed the extent to which this is carried, would here be deemed a great interference with the liberty of the subject; and would not be tolerated. Apart from this, there are many excellent regulations, which, whilst they prevent the unpleasant operations of that trade from becoming a nuisance, or being prejudicial to the health of the public, facilitate the computation of the fluctuations in the prices of food, enabling the masses to be provided for with certainty, and furnishing data for most interesting and instructive returns for the statist. At the same time they afford the means of controlling a class of men, who, from the very nature of their occupations, have become strangers to all the finer feelings. The abattoirs are prominent

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\* The discussion on this paper extended over a portion of two evenings, but an abstract of the whole is given consecutively.

parts of this system, and it is conceived, that under a modified form of administration, they may be rendered perfectly applicable to this country.

In contemplating these vast establishments, the first impression must be that of wonder at the comprehensive mind of the man, who, amidst the turmoil of war, the establishing, or overthrowing of governments, or meditating the invasion of distant kingdoms, and, in fact, whilst engaged in contention with half the world, was yet so intimately acquainted with the details of the internal administration of the country, and particularly with those of so important a question as the supply of food for the metropolis, as to be able to devise and carry into execution a remedy for admitted evils. Perhaps nothing exhibits more clearly the soundness of the Emperor's views, and his admirable foresight, than the general completeness of the whole system, which has scarcely been changed since its first adoption; whilst, on the other hand, it is humiliating to our national *amour propre* to acknowledge, that Great Britain, in spite of its boasted cleanliness, still obstinately retains, in the centre of the metropolis, and in the midst of a crowded and increasing population, that monstrous nuisance, Smithfield Market, surrounded with numerous slaughter-houses, and other offensive trades incidental to them; and this, in defiance of the demands for a remedy, which can be so readily and cheaply supplied.

In 1810 a commission was appointed to consider the entire question,\* of which the Vice-President of the Council of Public Buildings was President, and combined with him was the Secretary of the same council, and M. Courbault, who had formerly been a butcher. This commission determined on a programme, which was made in that session (October 14th, 1810), and after the members had examined the proposals of five architects, they adopted a general plan for all the abattoirs, which shows the great pains and foresight with which the question had been considered, and demonstrates great knowledge of the necessities of the trade they were intended to assist.

A report was presented to the emperor Napoleon, upon the evils which existed in Paris, from the slaughter-houses being situated in all parts of the city. The evils complained of were the filthy state of the streets, by the passing of the cattle through them, as well as the danger to the passengers; the putrefaction of the offal and blood lying about in the slaughter-houses, and which, being thrown into the River Seine, the great receptacle for it,

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\* Almanach du Commerce de la Boucherie de Paris.



spread disease and death amongst the inhabitants ; the impossibility of preventing the sale and consumption of unwholesome and tainted meat, on account of the want of concentration, for the purposes of supervision ; and the difficulty which existed of controlling those who conducted the trade of the slaughterer.

Upon this report a decree was passed, directing the erection of five abattoirs ; three on the north side of the River Seine, and two on the south side, and on the 15th of September, 1818, they were opened for business. These establishments are very spacious, and there is no doubt but that still greater numbers of cattle might be slaughtered there than at present.

They are each respectively situated about one mile and three-quarters from the centre of the city, within the barriers, in spaces still tolerably clear from habitations ; but probably at the time they were built there were still fewer houses in their vicinity.

The following table gives their names, sizes, and the number of slaughter-houses in each :—

NAME.	Extent, in Acres.	Number of Sheds and Slaughter-houses.	Area of Slaughter-houses, in Square Yards.
Montmartre . . . . .	8 $\frac{3}{4}$	64	3872
Ménil Montant . . . . .	10 $\frac{1}{4}$	64	3872
Grenelle . . . . .	7 $\frac{3}{4}$	48	2904
Du Roule . . . . .	5 $\frac{3}{4}$	32	1936
Ville Juif . . . . .	5 $\frac{1}{2}$	32	1936

It should be stated, that the trade of the butcher is protected and regulated by a syndicate, or guild, which was established many years ago, and is formed of a President and six Associates. This body advises the Minister of the Interior upon all matters connected with the interests of the trade, both as respects the abattoirs and the markets, and is consulted upon the enactment of all laws tending to regulate it. It has also the command of certain funds, derived from the abattoirs, from which it grants superannuation pensions.

The markets from which Paris is supplied with cattle, sheep, and calves, are at Poissy, which is thirteen miles to the north-west, and at Sceaux, which is five miles and a quarter on the south of the city. There are two other markets in Paris for cows and calves, namely, La Chapelle and des Bernardins. The two former are of the most importance, and are under the control of the municipal authorities.

The market at Poissy is held every Thursday, and at Sceaux

every Monday, when the butchers attend and purchase their stock. At the former is established a branch of the Municipal Bank, at which the butchers have a credit according to a fixed regulation. Every butcher must be licensed to carry on his trade, and must give security, by depositing three thousand francs (£120) in the Municipal Bank, up to which amount he can draw upon the Bank of Poissy, for payment to the sellers of the cattle which he purchases, and in some cases, according to his respectability and credit, he is permitted to exceed this amount, by paying interest, and repaying the loan and the original deposit within a limited time.

From the markets of Poissy and Sceaux, the cattle and sheep are driven to the abattoirs, by drovers who are under the control and license of the municipality, but who can only take a certain number, at one time, under their charge. They are responsible for any damage that may occur, and are also obliged to drive the cattle by certain routes, to the particular abattoir to which the cattle are consigned. The routes from each market to the different abattoirs are clearly laid down by the authorities in their code of regulations, and are generally along the roads encircling Paris, entering by the barrier nearest to the particular abattoir. Having arrived, the cattle are driven into pens, whence the owners select them, and drive them to their stalls, where they are kept till they are required to be slaughtered.

In the plate accompanying this paper, is shown the plan, elevations, and sections, of the abattoir of Montmartre, which is the most important in extent. As before stated, they all so nearly resemble each other, that an explanation of one of them will suffice to render clear the construction and general arrangement of all. The entire space is surrounded by a high wall, so that nothing of what is passing within can be seen from the exterior, and the entrances are closed by iron gates, the avenues, passages, and yards being all paved, and provided with proper water-channels and gratings, so as effectually to take off all rain-water drainage.

The slaughter-houses, **A**, are built of limestone, the walls being of plain rubble, with ashlar dressed quoins, jambs, stringcourses, lintels, and plinths; the walls are about 16 feet high, and upon them is placed the roof, which is supported on timber posts. The roof consists of timber-framed principals, projecting a distance of 10 feet all round, open at the sides, and covered with pan-tiling of a heavy description.

Each slaughter-house is  $16\frac{1}{2}$  feet wide, by 33 feet long, and 15 feet high, and is fitted with a strong framework of timber, about



8 feet above the ground, consisting of two parallel beams, in the direction of the length of the building, and about 6 feet apart ; they are fastened into the wall at one end, but the other rests on another beam, which crosses the slaughter-house transversely. They are all provided with basins, hewn out of the stone floor, for collecting the blood, and large holding-rings are fastened into the floor. A small windlass is attached to the wall, so that in killing an ox, his head is brought down by a rope to the ring, and is held steady by one man, while another strikes it with a poll-axe ; the carcase is then hauled up by the hind legs, and in that position skinned and dressed, and remains suspended till it is taken away by the butcher to his stall ; about eight or ten carcasses can thus be suspended at one and the same time. At the sides of the walls and on the beams, are hooks upon which sheep and calves are hung, but in such a manner as to prevent their touching the walls. Each slaughter-house is well provided with water, so that after the dressing of each beast, the place may be thoroughly washed, and in order to prevent the blood from remaining between the flags, the joints are set with iron cement, level with the flagging. The slaughter-houses have two doors, one opening into an avenue, or passage, and the other into a yard, **C**, which generally divides one tier of buildings from another parallel to it, or to a building containing the stalls.

In this yard are the large benches on which the sheep and calves are killed ; and down the centre of it is a channel, towards which the pavement inclines, like that of the slaughter-houses, leading to a grating over a sewer, where there is a proper trap to prevent the effluvium from returning.

The hides and skins are collected and taken away by the fellmongers ; the intestines are also collected, washed, and sold. The tripe of bullocks, sheep, and calves, and the feet and heads of the two latter, are cleaned in an establishment fitted up for that purpose on the premises. The blood, of which it is ascertained that an ox contains three gallons, a sheep three pints, and a calf about a gallon, is all collected, and the cellular tissue and clot being separated from the serum, the latter is put into casks for use in the sugar refineries, where, however, it is not employed to the same extent as formerly, calcined bones being now more commonly used. The clot is subjected to a chemical process, by which it becomes nearly black, and is then put into casks and sold as manure. The contents of the paunches, which measure about two gallons each, are collected in the 'voiries,' or manure yards, and are taken away every day for manure, with the dung from the stables. The hearts, livers, and heads are taken by the butchers, and sold at their shops. The

fat from the insides of the animals is collected and taken to the tallow-melting house, which is also on the premises.

Over each slaughter-house is a floor paved with hexagonal tiles, having a passage upon one side, the other part being divided off by a kind of wire netting. These were originally built for drying hides and skins in, or for keeping meat cool until it was required to be transmitted to the butchers' shops. For these purposes this floor was admirably adapted, in consequence of the great projection of the roof, which keeps away the sun, and its being open to the tiling; but of late years these lofts have not been used for either of the above purposes.

The buildings containing the stalls, **B**, generally placed parallel to the slaughter-houses, or at their ends, are nearly similar in external appearance to those for the slaughter-houses, except that the roofs do not project so much, and the walls are carried up to the roof. The interior of them is, however, very different; they have a passage up the centre, and on one side the stall, or division for cattle, which, being about 16 feet wide, will each hold five beasts; on the opposite side of the passage are pens, which will each contain about twenty sheep and calves. The whole is lighted by windows, and has a door at each end, and sometimes one in the centre. Over each stall is a loft, reached by a staircase, divided off in the same manner as the stalls beneath. In these compartments each butcher, holding a stall, keeps his hay and straw locked up. The roof presents no particular feature worth recording.

There is also another kind of building, **F**, in which the fat is manufactured into tallow. The ground floor is generally occupied by the boilers, which hold from 1000 lbs. to 4000 lbs. each, in which the fat is melted. After it has boiled a sufficient time over a slow fire, the tallow is run off into tubs, and left to cool; the residuum, or cellular tissue, is then put into a powerful press, and the remaining tallow forced out, leaving a cake of greaves, which is used as food for dogs and pigs. Under these buildings are cellars, in which the tallow is kept till it is required for the market.

The buildings marked **I** in the plan, are the 'triperics,' in which the tripes are cleaned and prepared, and the sheep's feet and calves' heads dressed for the markets. These are fitted with boilers and washing places, but have no upper story, so that the effluvia from the processes may ascend and pass through the tiling.

There are suitable buildings, **G**, for stables and coach-houses, and other conveniences.

The water is supplied by different means to each abattoir. At



Montmartre it is pumped up into a reservoir, **H**, by a steam-engine. At Grenelle the celebrated artesian well affords an ample quantity, but the water being naturally warm, it is allowed to cool before it is used. At Ville Juif the water is pumped up by horse power. The two other abattoirs are supplied by a water company.

On each side of the entrance gates are the lodges, **D**, in which the superintendents and police reside, and where the office of the administration is kept. At the commencement of 1847, a new system of collecting the dues of the abattoirs was introduced, by which, instead of charging so much per head for the cattle upon entering, and weighing the tallow, all the meat which leaves the abattoirs is now weighed and a uniform rate of toll is charged; toll-houses have thus become necessary, and one is therefore erected in each abattoir, opposite to the entrance, having a weighing machine attached to it.

The returns of the annual expenditure and income of these establishments, prove that, as well as being highly important in the internal economy of the metropolis of France, they are profitable in a commercial point of view.

It is essential to impress these facts very strongly, because, great as the cost of their erection in this country must be, any doubts as to their becoming profitable investments will be removed, and thus one great objection to their introduction be obviated.

The population of Paris is about a million, and the following table\* gives the number of cattle which have been slaughtered during the last four years at all the abattoirs:—

	1844	1845	1846	1847
Oxen . . . . Head	76,565	77,543	80,256	82,519
Cows . . . . „	16,450	20,954	21,980	24,990
Calves . . . . „	78,744	83,282	84,444	83,577
Sheep . . . . „	439,950	59,470	487,644	503,113
Pigs and Wild Boars „	87,987	96,880	93,501	..
Tallow melted in the abattoirs . . lbs.	..	..	11,085,963	11,867,567

The original cost of the five abattoirs was about £680,000, including the purchase of land and every contingency; but there is no account as to the cost of each.

The following is a general statement of the income and expenditure of all the abattoirs in 1846:†—

\* *Annuaire du Bureau des Longitudes*, page 118.

† From the “*Compte Générale des Recettes et Dépenses de Paris*,” Sheet No. 11, and page 92, Paris, 1846.

INCOME.			
	£.	s.	d.
Tolls arising from slaughtering cattle, &c. . . . .	39,286	13	0
„ „ melting tallow . . . . .	2,062	5	0
„ „ washing and dressing tripes, &c. . . . .	6,046	18	0
„ „ rent of slaughter-houses . . . . .	213	0	0
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	47,608	16	0
To which must be added the revenue derived from the sale, by public auction, of blood, manure, and sewage, as these belong to the syndicate * . . . .	1,203	0	0
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Total of Income . . . . .	£48,811	16	0

EXPENDITURE.			
The expense of the agents and labour for the abattoirs	2,117	15	0
The expense of materials for the service of the abattoirs . . . . .	1,826	17	0
Restitution of undue and overpayments . . . . .	200	0	0
Repair of slaughter-houses, stalls, stables, and other works . . . . .	814	0	0
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	4,958	12	0
To which must be added the payments of the syndicate for salaries of inspectors, petty expenses, charity, pensions, &c.* . . . .	1,203	0	0
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Total Expenditure . . . . .	6,161	12	0

SUMMARY.			
Revenue of all the abattoirs . . . . .	48,811	16	0
Expenditure . . . . .	6,161	12	0
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	£42,650	4	0

The following are the receipts at all the abattoirs for the three years up to and including 1846 :—

	£.	s.	d.
1844	44,077	14	0
1845	46,822	19	0
1846	47,608	16	0

The Author was induced to undertake this inquiry, with a view to the general introduction of abattoirs into this country, as a branch of the sanitary system, and he has also endeavoured to discuss the question of their applicability as a commercial undertaking.

He has here given such a selection from the information current on this subject as he conceives to be most interesting and consistent with the objects of the Institution.

The Paper is illustrated by an engraving of the Abattoir Montmartre, impressions of which are permitted to be taken for the use of the Minutes of Proceedings.

\* From the “ Almanach du Commerce de la Boucherie, 1846.



Mr. CHADWICK said he had listened to the paper with great satisfaction, as it was connected with a subject to which he had devoted his most anxious attention. The evils of this kind which Buonaparte removed in Paris, still remained in great force in London, and he feared it would need a power as absolute as that of Napoleon to eradicate them.

The subject had attracted the attention of Mr. Chadwick's colleagues on the Sanitary Commission, and its consideration had only been postponed, on account of other, though not more important inquiries. The chief difficulty, both in the metropolis, and in other parts of England, was, he believed, rather administrative, than arising from a want of perception of the great convenience abattoirs would offer in avoiding dirt and filth, disturbance in the streets, scenes of brutality, and the existence of a number of ill-conditioned places which the present system perpetuated. The great evil, however, connected with the actual existence of slaughter-houses in the interior of towns, was that arising from the various offensive trades, such as tallow-melting, cat-gut making, &c., which were necessarily established in the immediate vicinity, and which eventually became more objectionable than the slaughter-houses themselves. One of the most important effects to be anticipated from the removal of the slaughter-houses, would evidently be the transfer of all the trades connected with them to some less densely populated neighbourhoods.

The objection of the butchers in England (who as a body were not so united as in France), to such an establishment as that at Islington was, that they were only exchanging the control of one irresponsible body for another, namely, from the Corporation of the City to a Joint Stock Company. Now the real danger to the public, might be in trusting the butchers themselves with too much power; but that objection could be removed by legislative enactments, and an adaptation of the foreign system to the English trade, which would no doubt take place.

It had been expected, that the railways would bring a large quantity of killed meat to the London market; hitherto, however, that anticipation had not been realized, and it had been stated, that the meat did not travel well, in consequence of inadequate accommodation for its carriage; but such a reason could not be permitted long to interfere, as the ingenuity of the carriage builder would soon remedy that defect.

He thought Mr. Grantham had done well to bring the general question before the Institution, and hoped that good would result from its discussion.

Professor OWEN had great pleasure in offering his testimony to the accuracy of Mr. Grantham's account, as on more than one occasion he had carefully examined the question, particularly in the autumn of 1847, when as a member of the Metropolitan Sanitary Commission he inspected the abattoirs, and their dependencies in Paris, with great minuteness, receiving every possible facility from the authorities, and being much assisted in his inquiries by the admirable documents published annually by the *Prefêt de Police* and the *Syndicat des Bouchers*. The great feature which called for admiration in the abattoirs of Paris was their bearing, in an economical point of view, on all the numerous classes who were affected by the supply of animal food; the graziers were benefited by extensive markets being provided for them, where their cattle were easily examined, and where the trade was enabled to go on directly between the grazer and the actual purchaser, without the system of middle men, or meat salesmen, whose assistance became indispensable in London, on account of the difficulties of Smithfield. This was one of the direct taxes on meat, which the consumer had to pay.

A more important benefit was the arrangement of the markets, which rendered it almost impossible that any diseased meat could enter Paris. By the excellent existing supervision, every tainted, or diseased animal was at once rejected, and its introduction entailed due punishment. Then, after the grazer, the master butcher derived a benefit, by receiving the cattle in the best possible condition for killing, as they were not over-driven, the abattoirs being so placed and the system of conveying the fattened beasts to them being so arranged, that they came there in a totally different state from that in which they arrived at Smithfield. The contrast was extremely striking, and as a physiologist he conceived it to be of the greatest importance to the wholesomeness of the food.

In London the majority of the beasts were slaughtered in a state of fever, and when the blood was in an unnatural state. The microscope clearly demonstrated the shocking state of the animals, and it was a fact that he had never met with the blood of a calf, ox, or sheep in a slaughter-house in his own neighbourhood (Clare Market) which he could pronounce to be in a thoroughly healthy state, and it followed of necessity that the quality of the meat was deteriorated.

There were a few first-rate wealthy butchers in London, who avoided this evil, by having their own fields, or turning their sheep into the Parks for a few days; but in Paris it was entirely obviated, by placing the abattoirs at the extremities of the city, although within the walls, on account of the municipal duties. It would be



difficult to improve the internal arrangements of the Paris abattoirs, but if they were susceptible of amelioration, he was sure they would emanate from the Members of the Institution of Civil Engineers. At the abattoirs in Paris, the sheep were placed in small paddocks, the cattle had plenty of straw, and in some places grass yards, where they rested for some days, and were therefore in a perfectly healthy state when they were slaughtered ; for it was of little real avail having the cattle apparently free from disease, if they were driven into a fever before they were killed, which was the case with nearly all the cattle brought into the metropolis. In Paris too there was no waste of the offal, all the parts of the animal being systematically converted into their immediate profitable use. Now that the blood was not entirely used for purifying sugar, the French adopted a chemical process, for converting it into a solid manure, which appeared to be equal to guano ; and all those operations were carried on without that extent of injury and inconvenience to the neighbourhood, which appeared inseparable from the system of this country.

Another advantage was, that the butcher, getting his meat in a better condition, was able to keep it fresh much longer than it could generally be kept in London, for he had seen in Clare Market fine joints of meat thrown on to the offal heap and carted away in thirty hours after the slaughter of the animal ; this had been the case with carcasses which had been suspended for only one night in the tainted atmosphere of the slaughter-house. The owners of these places appeared not to know, that a piece of fresh meat, placed within the atmosphere of tainted meat, would rapidly partake of the corruption, and seemed also not to be aware, that their filth and ignorance combined to make them pay a large fine out of their own pockets, in the shape of meat thrown away, if it could not be forced, by its cheapness, on the poor inhabitants of the district.

He wished, if the Parisian system was introduced into London, that its benefits should be enjoyed by all ; but he feared, without due legislative control, that the benefit of it would be obtained only by the spirited individuals who got up, on private grounds, the first movement in the right direction ; it was right they should be rewarded, but he thought it was better that the movement should be so directed, as to ensure a benefit to all classes. It was a fallacy to suppose that Englishmen would not endure the restrictions, to which the butchers were subjected in Paris ; there were other classes of men equally sensitive, and possessing the true spirit of Englishmen, who had for years (until lately) endured a more galling interference,—he meant the supervision of the glass-makers, the dis-

tillers, and other trades, by the Excise. He had no doubt that Englishmen would submit to such regulations as a wise Legislature deemed proper for the benefit of all, particularly when they did away with the evil and nuisance of such a place as Smithfield.

Mr. LESLIE conceived, that the passage of the cattle through London to the Islington market would still be a great nuisance; he had been told that a large number of the sheep which came to London, arrived from Kent, and the nuisance of their going through London to Islington, would be greater than that caused by their going to Smithfield. He also called attention to the fact, that the £42,652 paid over to the city of Paris was not clear profit, but was a return of about  $6\frac{1}{4}$  per cent. on the original cost of the abattoirs.

Mr. C. MAY conceived the subject was so clear to the common sense of every one, that it resolved itself simply into a pecuniary question, affecting the city of London, and when that was arranged, the whole matter would be settled. Bad as our system might be, he still thought better beef was to be had in London than in Paris; but he believed great improvements might be introduced, and he thought the best mode of carrying out their views would be, by impressing them on the public mind, and by showing the butchers the losses they sustained, in every way, by the present system.

Mr. ARMSTRONG begged to direct the attention of the meeting more directly to the Islington market, with which he was intimately connected, and of which the actual circumstances should be correctly known.

An Act of Parliament was in existence, for establishing that market and allowing certain limited rates of tolls to be levied; it was only proposed to establish one abattoir at that spot, and there was no idea of monopolizing the whole trade of London, which indeed would be impossible. This was proved at Paris; where, in a city so much smaller, it was found necessary to have five abattoirs; it therefore did not require much argument to show, that a larger number of establishments would be required for London, and those should be so placed, as to intercept all the droves of animals arriving in the metropolis. It was proposed, at the Islington market, to attach to the abattoir small sheds, to be let, at a certain rent, to the butchers, where their own servants might kill the animals. If by any mutually advantageous arrangement, the Company could take from the butcher those parts of the offal, &c., which were used for various manufactures, the public would rather be gainers.

When other abattoirs were established, it would be competent for a butcher to select that one which afforded him the greatest accom-



modation, and if the Islington Company should demand too high a rent for their shops, competition would spring up, and thus the matter would speedily find its level. Seven-eighths of the cattle coming to Smithfield came from the northern counties, and were mostly carried by railway; and even with regard to the sheep from Kent, they might be ferried across the river, and brought by the West India Dock Junction Railway, which now came within less than four hundred yards of the Islington market, into which there would soon be a branch formed; or by the railway bridge constructed across the river at Richmond, by which means, the passage of cattle, through the streets of London, would be entirely avoided.

Mr. ALLEN RANSOME said he was intimately acquainted with the views of the farmers on the subject, as he had heard the question discussed at their club. The unanimous feeling appeared to be, that an establishment outside the metropolis, with adequate room for the animals, where they could be free from that state of excitement to which they were subjected, from being driven through the streets, would necessarily be advantageous; the main thing that opposed itself to the plan, was the actual scarcity of buyers there, and he much feared that as long as the interests, which then surrounded Smithfield market, were made to tell, as they now did, on the butchers and salesmen, so long buyers would be deficient there; he thought the best way to remove that objection, was to get up a feeling of willingness in the minds of the farmers, to trust their stock in a better place, and he had no doubt that purchasers would then go to a place where the cattle could arrive without the loss, or damage, to which they were now subjected. The salesmen were the parties who really interfered most, to prevent this desirable improvement for the farmers and the public, and they were actuated solely by the principle of self-preservation, because from the moment that the butchers could easily come into actual contact with the farmers, and purchase directly from them, the occupation of the salesman would be gone. It must be self-evident, how desirable it would be to do away with the present system, and there could not exist any reasonable doubt of the proposed improved measure being soon fully carried out.

Mr. C. FOWLER said, his experience in markets convinced him of the great evils attending the mode in which beasts were now slaughtered, and of the degrading tendency of the proximity of such places. On visiting a slaughter-house, he had been surprised to find young tradesmen in the neighbourhood attending and officiating as amateur slaughterers. He was happy to see the present movement, which

however, he thought had been taken up with more spirit in the provincial towns than in London.

A very interesting report had been published by a Commission from the late French Government, which had visited London, as well as most of the principal cities of Europe, in order to collect information on this subject. In that report, the Commissioners commented somewhat severely, but courteously, upon the actual state of the butchers' trade in London, and made many interesting remarks on the subject.

The great opposition to any alteration in their present system, was the vested interest of those supporting it, because they were in turn supported by the system. These vested interests should be met by some strong measure of the authorities, and if the public expected to be benefited, they must adopt strong measures, to impress upon the Legislature, the necessity for the consideration of these crying evils, and of the adoption of some mode of remedying them.

Mr. ELLIOTT thought it right to mention some objections urged by the trade against the general establishment of abattoirs in this country ; these were, that it would be necessary to send their servants to the abattoirs to slaughter the cattle, and they might possibly be at some distance from their shops ; that they might collect there in numbers and form bad habits ; and also that the butchers would not have so well-regulated a supply of meat, as at present : if the supply was now deficient, they had but to send to their slaughter-house, and kill one or two sheep, to meet the wants of their customers ; whereas under the proposed system it might be necessary to send several miles for the purpose.

There could be no doubt of these objections being eventually overcome, but they must at once be met in the proposed arrangements of any establishment, for it was essential to receive the co-operation of the butchers, which could only be obtained by meeting their views liberally.

Professor OWEN explained, that no persons were permitted to congregate in, or about the abattoirs of Paris, excepting those who were actually employed there, and that the internal arrangements were so excellent, that no bad conduct would be tolerated. In Paris, in addition to the general cleanliness observed in the shop, and the rapid removal of the offal, the butcher brought to his shop in the abattoir vans, excellently constructed for the purpose, only the meat which was required to be sold within a given time, whereas in London the whole live beast was brought home, although only two-thirds of it was available for food ; the hides lay about, and were irregularly taken away, and the blood was collected in



the "blood-hole," which was not regularly emptied, nor was the other offal and dung conveyed away quickly enough. All these combined to render the present system seriously prejudicial, not only to the sanitary condition of the immediate neighbourhood, but to the whole metropolis.

It was remarkable that in England, where the advantages of the introduction of machinery and tools were so fully appreciated, such a stubborn adherence should be shown, to an antiquated and vicious course with respect to their markets, and such a want of perception of economy. By the present system, the drover was actually paid for depreciating the value of the animals, by his treatment of them, and it was deemed preferable to pay for the risk of an accident in the crowded streets, than to send the beasts for sale to a convenient spot in the suburbs. This was blindness enough, but it was difficult to imagine how, or why, the public would continue to submit to the annoyance, danger, and inconvenience to the traffic, as well as to the filth in the streets, caused by the passage of these droves of animals, when they had eventually to pay for it, in the shape of an increased price for meat, which really amounted to an enormous tax upon the public at large.

Mr. GRANTHAM stated that in a treatise he had written on the subject,\* he had alluded to the propriety of all the manufactures connected with the use of the offal, being included in, or concentrated around, one establishment. The establishment of abattoirs, would also be of use, in ascertaining the consumption of meat in London, which at present there were no means of ascertaining. In Paris every butcher who killed meat paid a duty per pound on the meat leaving the abattoir; this he conceived to be a good system, as the butcher could lock up his meat in his store at the abattoir, without its being under the control of the Company; there was also a strict police at the gates which prevented anything like theft. He had no doubt, that when abattoirs were established in the metropolis, along with the different trades in connexion with them, the butchers would find they could kill their meat more economically than at present, and instead of the expense being three shillings and sixpence a head for cattle, it would not be more than one shilling and sixpence.

He thought abattoirs were desirable in every point of view. The offal was disposed of with much more difficulty in the country than

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\* *Vide* "A Treatise on Public Slaughter-Houses, considered in connexion with the Sanitary Question; describing the practice of Slaughtering in France and England, with an Historical and Statistical Account of the Abattoirs of Paris." By R. B. Grantham. 8vo. London. 1848.

in London ; but if central establishments like these were formed, there would be a certain sale for everything.

The contrast between the system of private killing of animals in London and the abattoirs of Paris, was not more striking than that between the markets of Smithfield and Poissy, and in neither case was it to the advantage of England.

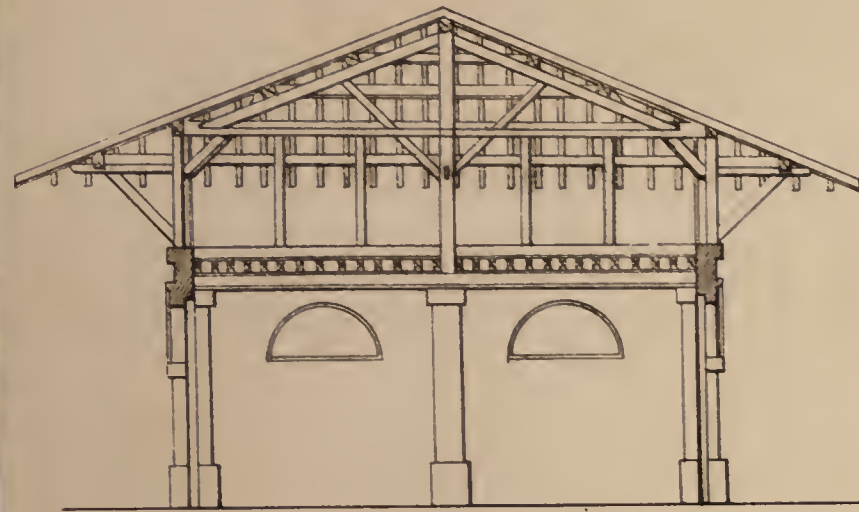
Mr. C. MAY could not help remarking, that there would be great objections to including any of the offensive trades within the walls of an abattoir, as the tendency must evidently be, as had been stated by Professor Owen, to taint the meat, and thus do away with one of the great advantages of the proposed establishments, which he sincerely wished to see commenced immediately.

Mr. GRANTHAM said, with reference to the observation made by Mr. May, as to the evil of connecting offensive trades with the slaughter-houses, he thought the modes proposed in the pamphlet, which he had laid before the Institution, would quite meet that difficulty ; the ventilating towers would carry off most of the offensive ingredients that would arise, in addition to which they would be well partitioned off, so that the draught could not carry any of the effluvia to where the meat was kept ; another important part of his plan had reference to the preservation of meat during the summer, in rooms properly ventilated and cooled by dry air and other artificial means.



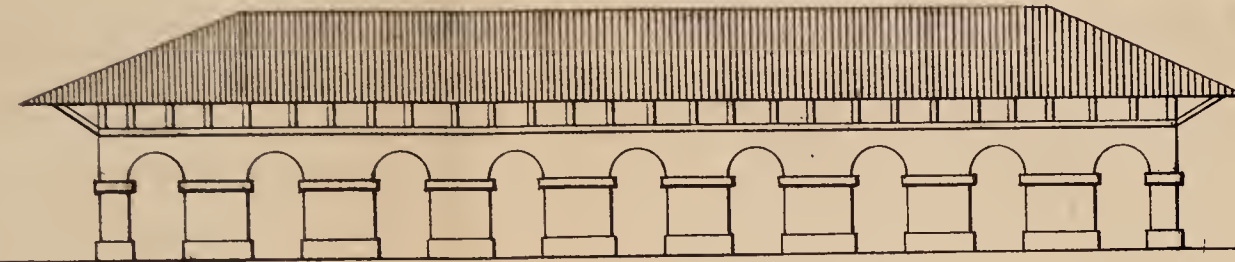
PLAN, ELEVATIONS AND SECTIONS OF THE ABBATTOIR; MONTMARTRE, PARIS.

*Transverse Section of Slaughter House.*

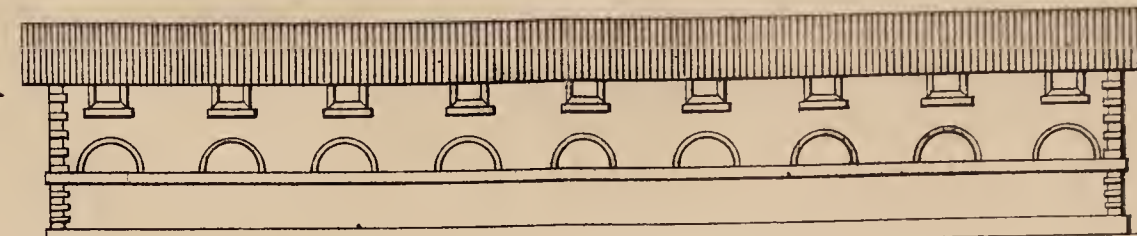


*Entrance Lodges.*

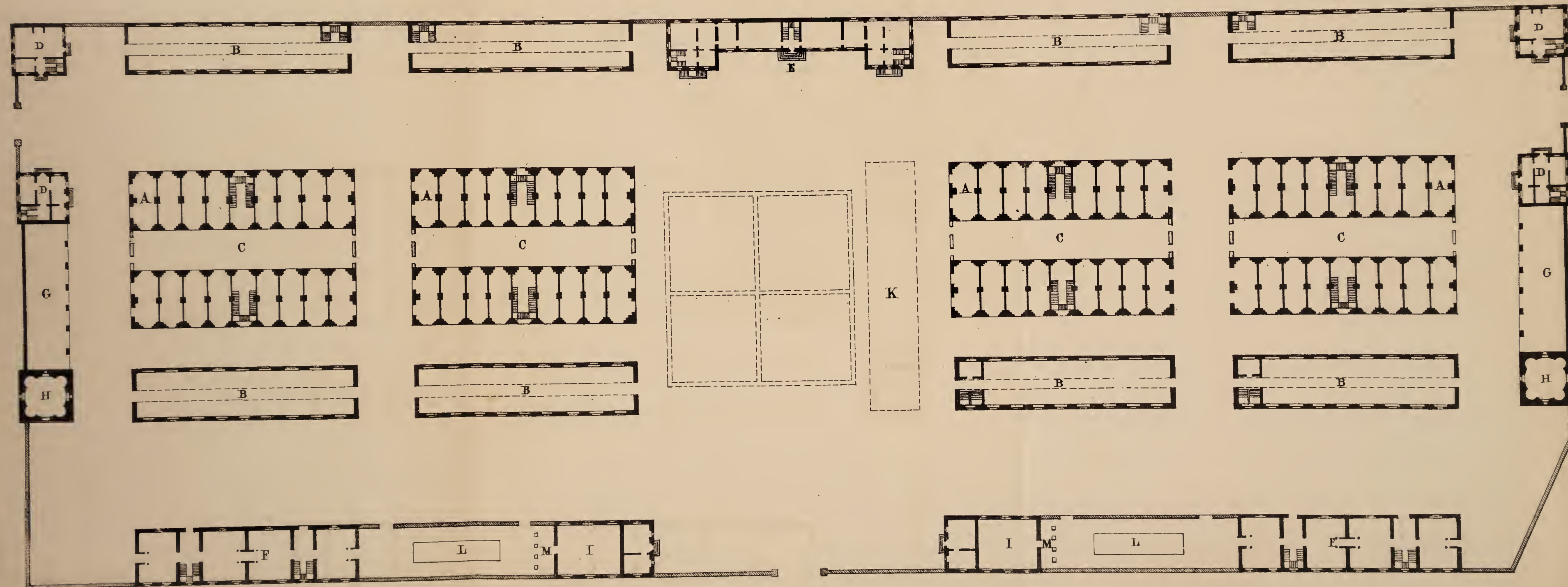
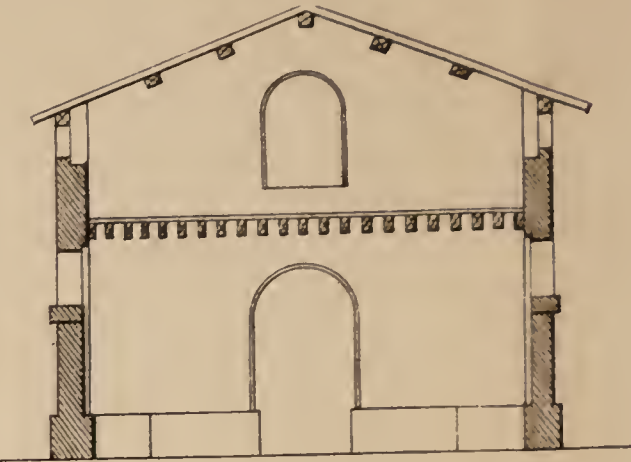
*Elevation of Slaughter-house.*



*Elevation of Sheds.*



*Transverse Section of Sheds.*



REFERENCE.

- A. Slaughter House
- B. Sheds
- C. Yards
- D. Porters Lodge
- E. Residence of Superintendent
- F. Melting Houses
- G. Stables
- H. Reservoir
- I. Tripe Houses
- J. Pens
- K. Manure Yard
- L. Privies



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